breastfeeding (12.5%), frequent giving of colostrum to newborns, and high bottle-feeding use (40% of babies zero to 11 months were bottle-fed within 24 hours of the interviews).

SC/US conducted a Knowledge, Practice, and Coverage (KPC) survey in the Andkhoy area in January 2003 using a 30 cluster sampling technique. Respondents were 300 mothers with children 0-24 months of age. Survey results showed an increase in the knowledge of mothers about the importance of immediate breastfeeding with colostrum from 25% in 1999, when an earlier KPC survey was conducted, to 45.5% in 2003. In addition, 30% of respondents knew the importance of exclusive breastfeeding until four months of age, and 20% reported that they did not bottle feed.

Methodology

The Approach

This exploratory and qualitative research on breastfeeding and weaning was carried out in the four districts of the Andkhoy cluster during the week of August 7-14, 2002. It followed a June 2002 SC/US quantitative survey measuring important nutritional anthropometrical indices in the Andkhoy area, and sought further understanding of beliefs and practices related to breastfeeding, supplementary feeding and weaning practices. Given the limited amount of information currently available in Afghanistan on breastfeeding and weaning practices, SC/US chose to use qualitative tools in this research in order to enable in-depth and exploratory questioning accompanied by free-response reporting.

Three SC/US investigators developed qualitative tools in consultation with SC/US health staff and MoH staff, local researchers from the area and UNICEF colleagues – all in Andkhoy. The tools were tested in the field, and subsequently refined; and extensive training and support of researchers were given so the tools were used properly. Following large group meetings with men and women to raise awareness about the research, the researchers used two types of tools—focus group discussions and individual interviews—to collect the data. Respondents were chosen on the basis of convenience sampling, ensuring that each district was equally represented according to population figures.

- Focus group discussions (FGDs): Interviewers conducted discussions with groups of mothers, fathers and grandmothers of children between five months and two years of age to ascertain general trends in feeding practices for young children, obtain local terminology for those practices, and identify issues for further exploration during interviews.

- In-depth interviews (IDIs): From among focus group participants, interviewers identified mothers and fathers with at least one child under two years of age willing to be interviewed in more detail about breastfeeding and weaning practices. These parents were divided into three categories: mothers with a child between zero and four months of age, mothers of children between five months and two years of age, and fathers of children under two years of age. Mothers and fathers were interviewed separately. The question guides focused on breastfeeding practices for the first category, and on weaning practices for the second. The tools were designed to be general guides for researchers, with prompts about issues to probe, rather than as questionnaires that should be strictly followed. Copies of the FGD and IDI tools are included in Appendix 2.

Although the IDIs were intended to involve only one respondent, others were present for most interviews (grandmothers and aunts of the children for the female interview, and other men from around the village for the male interviews). This was impossible to avoid in the cultural context, so researchers were trained to focus on the respondent and to deter others from influencing the respondent by giving their opinions during the interview. Instead, relatives and neighbors were encouraged to speak after the interview, and their comments were not considered as part of the information gathered. Female researchers were also trained to observe breastfeeding, weaning, and childcare practices, and to note them. The topics they were asked to observe are listed in Appendix 2. Researchers were also trained to observe household assets as a way to classify households in terms of socio-economic status; ultimately, SC/US did not analyze this data due to lack of time.

Because this was qualitative research that required a great deal of understanding and probing of the topic, the investigators invested a great deal of time educating the interviewers about the issues surrounding

feeding practices of young children, and in how to ask important follow-up questions.[13] Training and research schedules were adapted during the research process to accommodate interviewer support needs.

Conducting the Research

Interviewed mothers with children younger than four months old were between 19 and 53 years of age, with an average age of 32. They had an average of four children each. Interviewed mothers with children under two years of age were between 22 and 42 years old, with an average age of 31; they also had an average of four children each. Most women were illiterate; a few had attended school, but none for more than six years. Nearly half the mothers interviewed were poor and half from the middle class; only a very few were rich.[14] Most were breastfeeding their babies at the time of the interview. The average age of fathers interviewed was 40 years old, with ages ranging from 25 to 62. Most fathers were laborers or farmers, and a few were shopkeepers or drivers.

In total, the teams conducted 16 FGDs and 69 IDIs. Interview schedules ensured that both Turkmen and Uzbek ethnic groups were represented in the study. In total, 52 qualitative consultations were conducted with Uzbeks and 31 were held with Turkmens. One male FGD had both Uzbeks and Turkmens, and one female IDI was with a Pashtun mother. The table below shows more detailed information about the groups participating in these qualitative consultations.

Number of focus group discussions and in-depth interviews conducted

	Mothers of children <twoyears old	*Mothers of children <4 months old*	*Fathers of children <2 years old*	*Grandmothers*	*Total # of people*
Focus Group Discussions	7	0	6	3	16
In-depth Interviews	21	25	23	-	69
Total qualitative consultations	53	25	29	3	85

The Analysis

Data from the qualitative interviews was post-coded in order to identify themes and gain a sense of the prevalence of particular beliefs or practices. For example, the number of women who reported giving colostrum was noted. This counting is expressed in the results section by the words "many," "some," or "a few," approximately defined as follows:

[13] In the course of the research, SC/US learned lessons about the process of doing qualitative research that further qualitative studies should take into account. First, training researchers how to probe is important: investigators found it challenging to train researchers in a qualitative approach, and interviewers seemed to prefer having closed questions to ask, and boxes to check off. Next, intensive follow-up and monitoring in the field during the research process is also important, as is close monitoring of the reporting process directly after the research. (Note: Investigators worked every afternoon with the research teams to ensure accurate reporting and feedback on the research they had done in the morning.) Finally, it is important to build time and resourcing for translations into research projects: accurate translation of materials was difficult and time-consuming, and required extensive checking to ensure a high degree of accuracy.

[14] To determine wealth category, researchers were trained to observe household and other items. As noted in the methodology section, further analysis of this data proved too burdensome to be feasible, given the challenges of translating and checking all of the data.

- Many = more than 70% of respondents
- Some = between 30% and 70% of respondents
- A few = less than 30% of respondents

This report categorized the findings into 15 themes that are discussed in detail. The findings are meant to give insight into breastfeeding and weaning behavior in the Andkhoy area and are not intended to represent breastfeeding practices in other locations in Afghanistan. Because of the seasonal dimension of dietary intake and activities, the extent to which the findings represent breastfeeding and weaning behavior throughout the year.[15]

Notes on Terminology

The researchers tried to capture specific terminology that would be useful in understanding practices and in developing messages. Where collected, these terms are included in the text of the report.

In this report, SC/US uses the term newborn for children aged 0-40 days, infant for children under one year of age, and child for children aged one year or older.

[15] For example, the variety of vegetables and fruits available in the Andkhoy area is seasonal. Fresh vegetables are available between March and June and fruits such as melon and apricots are available during the summer months.

Findings and Discussion

1. Most mothers initiate breastfeeding eight to 24 hours after delivery; some breastfeed immediately. Almost half discard colostrum.

My mother said that if I put my breast in the baby's mouth, milk would come. Aghuz *is good for the baby. They [babies] won't get sick soon; they will grow fast and be strong. It is good for the mother, too, and she has less [abdominal] pain.* Aghuz *increases the love for the baby.*

A young mother, Andkhoy

If aghuz *comes, we give it immediately to the newborn.* Aghuz *is force. If we don't give* aghuz *the boy will not be a boy. If* aghuz *is given immediately, the baby will become strong.*

An Uzbek mother, Qaramqul

Mother's milk doesn't come immediately. It was also the same in my two first children. After the birth [of this latest child], the mother's milk came after one day. We know aghuz*; it is a little yellow. We haven't given [colostrum] to my three children. Elders of my family say not to give it; they say that* aghuz *is very powerful and makes a child's stomach hard. One drop of* aghuz *makes a* daig *(a cooking pot) of milk hard; that is why we don't give it to our children. My children, thank God, are all healthy. I haven't even taken one to a doctor.*

An Uzbek father, Andkhoy

All day on the day of delivery, I didn't have milk. I gave glucose because it was my first child and I felt shy about breastfeeding in front of others. When I gave my breast to my child, it didn't have milk—it came after two days.

An Uzbek mother, Andkhoy

Only a few women reported breastfeeding immediately (within half an hour) after delivery.[16] Some said they initiated breastfeeding within three to five hours of delivery, while the majority started breastfeeding between eight and 24 hours after delivery. (This finding contrasts with an SC/US January 2003 KPC finding that 76% of mothers initiated breastfeeding less than eight hours after delivery; the researchers are unable to explain the contrast and it deserves further investigation.) Just over half of the women fed their newborns[17] colostrum because they felt it to be beneficial for them. A few delayed breastfeeding for up to three days after delivery. A few Uzbek mothers who did not have milk on the day of delivery asked other lactating women in the family to breastfeed their newborns.

[16] Immediate breastfeeding has benefits for both mother and newborn. Mother's breasts are thought to be cleaner, and therefore safer, for newborns than other feeding instruments, and the colostrum produced in the first few days after delivery gives a child passive immunity to disease. There appears to be a link between the immediacy of breastfeeding and the success with which a mother and child are able to breastfeed. Immediate breastfeeding is also though to help the mother through causing uterine contractions that can help to expel the placenta and by reducing maternal blood loss.

[17] Work on identifying Uzbek and Turkmen terms for children of difference ages was incomplete in this research. Researchers identified the following Uzbek and Turkmen terms for children in the age group studied:

- Uzbek: for newborns (up to 40 days) *chegha lagh*, *machoogy*, *bacha gina*, *maida bacha*; for children four to six months *elkily*.
- Turkmen: for newborns (up to 40 days) *ba bak*.

Almost all women knew the word for colostrum in their own language (*aghuz* or *fez sooz* in Uzbeki and *filla* in Turkmeni). Of the interviewed mothers with children less than four months of age, just more than half had fed their latest child colostrum. The proportion of women giving colostrum to their newborns in the Andkhoy area was lower than the proportion found by the UNICEF/MoH study in Panjshir, where most women (about three-quarters of the respondents) had given colostrum to their newborns.

Women who gave colostrum to their newborns gave several reasons for doing so. They considered it a "gift of God" and good for the newborn's healthy growth and development. One Uzbek mother in Qaramqul said, "*Aghuz*, which is the first milk that comes out from mothers' breasts, gives energy to babies. The color is not similar to normal milk. Old women say that *aghuz* makes a baby strong and is good for their health. It makes the baby's bones strong and fills it inside." Many mothers who had given colostrum to their child also mentioned that colostrum increased the bond and love between a mother and her child. A few mentioned that feeding colostrum was good for boys, reduced pain in the mother's abdomen, and could help stop vaginal bleeding.

Most mothers who gave colostrum did so because they said it was their tradition, and it was a good thing. A few mothers started giving colostrum after receiving education from the clinic staff, e.g., doctors and traditional birth attendants. These women also said they now believed that deaths of previous children has been due to the lack of giving colostrum. One Uzbek woman from Qurghan said, "The doctor said to give *filla* when my baby was born at the hospital." Some grandmothers and mothers-in-law played an important role in encouraging mothers to give colostrum. In a few cases husbands also encouraged their wives to feed their colostrum to their babies. One Turkmen father mentioned that although he did not know about colostrum himself, he was a farmer and knew that the cow's first milk was very good for the calf.

Respondents gave a number of reasons for delaying breastfeeding, including beliefs about colostrum, shyness in front of others, pain in breastfeeding, or the belief that breastfeeding without the husband's permission was prohibited by Islam and that initiation of breastfeeding had to wait until permission was given.[18] This finding is concerning given that colostrum plays a vital role in providing immunity against various life threatening illnesses, specifically measles.

Just under half of the women interviewed discarded colostrum. Many of these women expressed it from their breasts and threw it away on the first day, while a few discarded it after over a period of two or three days. Some considered it dirty and harmful for their newborns—the thickness and the yellowish color of colostrum make some believe that this liquid is dirty and is not proper milk. This perception may be reinforced by language; colostrums is referred to as *aghuz* or *filla*, where as the subsequent breast milk is referred to as *aaina* in Uzbeki or *karpa* in Turkmeni.

Another common concern was colostrum's potential effect on newborns stomachs. Some mothers who discarded colostrum believed that it would cause abdominal distension and stomach ache in newborns. Some mothers-in-law reinforced this perception, as did some traditional birth attendants. One Uzbek mother in Qurghan said, "Until three days [after delivery] I did not give my milk; just glucose; and also I mixed soup with water. I squeezed out my *filla* and buried it under a tree. I don't know whether it has benefits; I heard *filla* makes the baby's stomach big and it is harmful. That is why I didn't give it to my baby."

Some fathers believed that colostrum had the power to coagulate breast milk in a small child's stomach and make it very hard. Others, both Turkmen and Uzbek, believed that colostrum was dirty because the milk had rotted in the breasts for many months during pregnancy and become sour. They believed this

[18] The belief that permission must wait for the husband's permission was found in a few Uzbek women.

was more common among those women who baked bread everyday and exposed themselves to a hot oven than among those who do not bake bread. One father said, "*Aghuz* is dirty and if a child drinks it, s/he gets a skin infection. The mother's breast during pregnancy remains close to the flame of a *tanoor* (oven) several times in a day. We think if a mother who has milk in the breast gets near a *tanoor*, it [colostrum] gets hard – like milk turns into yogurt when kept warm. It is because of this that every time a [pregnant] mother bakes bread she squeezes some of the *aghuz* and pours it in the river."

Another reason for discarding colostrum commonly mentioned by some Uzbek and Turkmen parents was that it could cause neonatal tetanus (*haftak*). Some women delayed breastfeeding for several hours for this reason. Among these, some waited for their babies to get vaccinated against *haftak* before breastfeeding.[19] A few had stopped giving colostrum because they believed it caused *haftak* in their newborns, and killed them. One Turkmen father in Andkhoy said, "We don't give *aghuz* to babies. I have four children and we only gave *aghuz* for my first child, who died of *haftak*. My other children did not drink *aghuz*. The women say that *aghuz suti* (feeding colostrum) is not good for the baby. We were giving it [colostrum] before, but now we don't."

Delay in breastfeeding, coupled with failure to give the newborn colostrum, affects the newborn's chances of survival in the first vulnerable hours after delivery and makes it more difficult for the mother to breastfeed afterwards. It also implies that the bonding – biological, physical and emotional – between mother and newborn is not recognized.

2. <u>Exclusive breastfeeding is rare; feeding newborns with water and glucose, non-human milk, other liquids, and soft foods is common.</u>

> *If the milk is enough, we don't give any thing else except the mother's milk, because it is the best food. If they [babies] take mother's milk, they will dance like small sheep.*
>
> A Turkmen father, Khancharbagh

> *In a focus group discussion, one woman said, "My milk has everything. Even if he becomes thirsty, I give nothing else, because my milk has water." Another woman replied, "This practice is not usual. Giving only milk and no water is impossible!" All the other participants agreed with the second woman.*
>
> Focus group, Qurghan

> *All day [on the day of delivery] I did not have milk; I gave glucose because this is my first child and I felt shy [to breastfeed in front of others]. When I gave my breast to my child, I didn't have milk; it came after two days.*
>
> A young Uzbek mother, Andkhoy

> *I gave water of watermelon and one time* kulcha *(biscuit). I gave my milk to her at night and before sleep. Whenever she wakes up I give [breast milk]. I also give boiled water in a glass because the weather is hot and her mouth becomes dry, also her lips. That is why I give water.*
>
> A mother, Qaramqul

[19] At birth, newborns receive BCG vaccinations from health staff at the clinics or during health outreach.

The clinic staff teach us that breast milk until four months is enough. We give boiled water because of hot weather at least one or two times a day.

An Uzbek mother, Andkhoy

Breasts are clean, the milk of the mother is ready and easy to give, and there is no problem. Joshak *(bottles) are dirty and give children diarrhea. Powdered milk is very expensive.*

A Turkmen mother, Khancharbagh

This study found that cases of exclusive breastfeeding were rare in the Andkhoy area.[20] There are no local terms for exclusive breastfeeding in either the Uzbeki or Turkmeni languages/cultures in the Andkhoy area. Knowledge about the importance of exclusive breastfeeding was poor among most interviewees; almost none understood the concept.

Only a couple of Uzbek families exclusively breastfed their newborns until they were 40 days old (the first 40 days after delivery is known as the *chilla* period),[21] without giving any water. Instead of being fed the nutritious first milk of the mother, many newborns survived on pharmaceutical glucose, water, and sugar/water solutions for several hours to several days after birth until breastfeeding was started. Some Turkmen and Uzbek mothers believed that breast milk was produced on the third day after delivery. Only a few Uzbek mothers in Andkhoy knew that exclusive breastfeeding was good for the infants, and that it also helped the mother avoid pregnancy for a while; they had learned this from health clinic staff. Despite this knowledge, these same mothers were giving boiled water to their infants.

Most mothers with children younger than four months were breastfeeding at the time of this research and, in addition, almost all were giving water and supplementary food, mostly because they did not want their children to be hungry or thirsty. The results of this study are comparable with the results from the WHO and UNICEF/MoH studies, which also found low exclusive breastfeeding rates.

Almost all families fed their newborns pharmaceutical glucose, sugary water solutions (*nabat*) and water in the first few days after birth. Most respondents gave their newborns water two to four times a day. Although giving newborns water and glucose was more common among mothers who delayed breastfeeding, mothers who initiated early breastfeeding also gave glucose and other liquids besides breast milk to stop newborns from being hungry, or because they had seen it done or been advised to do so by the clinic. An Uzbek mother-in-law in a focus group discussion said, "The clinic told us to give glucose for three days so the babies are not hungry."[22]

Almost all infants under four months were given boiled water with a cup, spoon, bottle, or from a plastic bag with a small hole in one corner. The mothers gave water because they believed that breast milk was

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20 WHO recommends that a child be exclusively breastfed for the first four to six months of life, and states that breast milk is enough to meet the caloric and fluid needs of the newborn during this period.

21 This is a period of uncleanliness for the mother (she cannot bathe, pray, or prepare food) and of vulnerability for both the mother and the newborn. Mothers and newborns need to rest and be protected from *nazar* (the evil eye), and newborns are also vulnerable to disease. The mother and baby stay home—perhaps in a room in which *asfand* (an herb) is periodically burned to ward off the evil eye. Mothers often eat a special restricted diet. Some mothers, generally those who are older, already have children, and have more control in the household, bathe and return to their normal duties after about ten days.

22 The research did not probe into why the clinics recommended giving glucose to newborns, but one casual comment indicated that clinic staff may see it as useful in treating newborn jaundice. The question of infant hunger must be explored further.

not enough to quench the thirst of the infants, especially in hot summer months (*cheetagh* in Uzbeki). Most families boiled water to make it softer and less *baadi* (gaseous) in order to avoid abdominal distension and stomach ache among babies.[23] A few well-off Uzbek women bought mineral water (*aabi madani*) in the bazaar for their babies.

Bottle feeding was low among mothers who had ample breast milk. About one third of interviewed mothers with infants younger than four months old had given them powdered or other non-human (goat or cow) milk (not formula) using a plastic bottle with a nipple, a practice supported by some mothers-in-law. Most women knew that breast milk was best; but, because they had problems in nursing and producing their own milk, some felt they had to give powdered milk, despite the expense and inconvenience. A few poor respondents said their families had sold wheat or other grain to buy powdered milk and bottles. A few women made the connection between giving the child bottled milk and then having less milk themselves, but not many.

In the words of one Uzbek woman from Andkhoy, "If the child drinks my own milk, he would get fat soon. But he cannot take my breast. When I give powdered milk, the child cries until I prepare it, and [so] I can't sleep nights. If he took my breast, I would not waste this much expense." Another Uzbek woman from Qaramqul said, "My milk is good now. I gave animal milk to my other children because my milk was not so much. Now [at the time of a good harvest] I don't give animal milk."

The high use of bottled milk for infants less than four months is especially problematic in a dry place like Andkhoy, where knowledge about bottle hygiene is poor, clean water is scarce, and flies are prevalent, especially in the summer months. Interviewers observed that almost all the mothers who gave their infants powdered milk had enlarged the hole in the bottle nipple so it became easier for the infant to suck. Interviewers also observed that the plastic bottles and nipples were not cleaned properly. Several of the mothers whose children were bottle-fed complained of the child having diarrhea and malnutrition. One Turkmen mother in Andkhoy said, "From the day she was born, she was sick. She did not take my milk and my breasts dried up. Every day she has been sick with diarrhea. When she's sick, she doesn't eat anything, not even powdered milk. I give her everything, but if she doesn't want it, I don't push her." Some mothers were opposed to bottle feeding because they considered it dirty and a source of illness for their children. Among them, many used spoons to feed newborns supplementary liquids.

In addition to water, glucose, and non-human milk, interviews revealed that most mothers fed their one-to-two month-old infants other liquids and soft foods such as soup, watermelon juices, and biscuits softened with sauce (*kulcha*) or soup, a practice supported by most mothers-in-law. When infants are between three and four months old, families added potatoes, cereal, and "soft" (*luhab*) food such as stew sauces. In most cases, infants were fed with supplementary food at least twice a day. Beliefs about the effects of "soft" and "hard" foods influenced what mothers fed their infants under four months (the concepts of "soft" and "hard" seem to incorporate both texture and some conception of disgestibility/tendency to produce gas). Some Uzbek mothers felt that soft food caused abdominal distension and stomachache in newborns and should be delayed until a child was four months old; a few Turkmen mothers mentioned the same symptoms for hard foods. Some poor families could not feed what they perceived to be good food (biscuits, meat broth, watermelon juice) to infants because they could not afford to.

The researchers found that in some cases, husbands played an important role in decisions about giving additional food or water to babies. A few Turkmen mothers in Khanecharbagh said they wanted to use bottles to give their babies water because it was easier, but their husbands would not permit it, while some Uzbek husbands in Qurghan would not allow their wives to give babies additional food because they

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23 The water in Andkhoy tastes salty.

believe that breast milk is good for babies' growth and development, or for fear that the child would develop diarrhea. A few fathers said that they believed feeding breast milk only for the first four months was best for babies, but that after their wives had died a few months after delivery, their babies were fed soft foods.

QARAMAT'S STORY

Powdered milk is readily available in Andkhoy area bazaars, but is expensive relative to the incomes of most interviewees. In addition, since powdered milk *is* expensive, and animal milk is not always available, families tend to use smaller amounts of milk powder than specified, and to dilute the milk with too much water, a practice which can easily lead to early malnutrition. The following case study illustrates this point.

Qaramat lives in a typical Turkmen high-domed mud room, in Qurghan district. She is 38 years old, and had recently given birth to twin sons when the research team met her. The 45-day old twins lay in separate cribs made of sacks and ropes and hanging on opposite sides of the room. As the interview progressed, it became clear that Qaramat did not breastfeed her twins. She said she had no milk. She said she had rarely had milk for her other children either. Two of her older children were sleeping in the room, and the other five had died. The crying of the twins became louder and louder as the interview progressed, and Qaramat responded to this by rocking their sack-cribs. Her sister came in the room, and started preparing their meal: half a teaspoon of powdered milk, a sugar cube, and some boiled water in a dirty bottle whose nipple hole had been enlarged. As she fed this mixture to one twin, she gave the other a pacifier.

The researchers (one of whom is a doctor) asked to examine the boys, and realized that they were very malnourished and dehydrated. The doctor asked Qaramat if she was sure she had no milk. She insisted, but on examination, it seemed that she was still producing milk from both breasts. The researchers decided then to abandon the interview, and began counseling her about breastfeeding. She took one infant to her breast, and held it in the wrong position (not laying across her lap, but instead almost standing), and carried on rocking it as it cried. The researchers advised her on easier positions to breastfeed, and stayed with her until she had fed both twins for at least 15 minutes each. She had enough milk to do so. The researchers encouraged her to drink plenty of tea (tea is commonly consumed compared to water) and eat plenty of food herself to improve her milk supply. They also advised her not to feed the infants any more powdered milk, especially since Qaramat was poor and was complaining about how expensive the powdered milk was. Qaramat said her family had actually sold their complementary food rations distributed from the clinic to pay for the powdered milk.

Five days later, the researchers returned with a female community health outreach worker from the local clinic to check on Qaramat. The twins looked much healthier, and Qaramat proudly demonstrated how she was breastfeeding them both. But she was still also bottle feeding them powdered milk. The community health outreach worker followed up on giving her advice, and the male community health outreach worker spoke to her husband. They brought the twins to the hospital after 15 days to get them weighed and checked. The twins were quite low weight, but they were no longer malnourished and dehydrated.

NOTE: A visit some months later revealed that one of the twins had died of an acute respiratory infection, but the second one was doing fine, relatively speaking.

3. Most children under two years of age are breastfed.

Aaina suti *(breastfeeding) is better for two to two-and-a-half years or until the mother becomes pregnant. Girls must be breastfed more than boys.*[24]

A Turkmen father, Qaramqul

When a woman is four months pregnant her milk changes. The color becomes stronger and becomes harmful for a baby—whether a girl or a boy. If I become pregnant again, I will stop breast-feeding and will save my milk for one year.

A Turkmen woman, Khancharbagh

My mother-in-law says that when I have a daughter in my womb, then the milk is not good for the son [pointing at the child in her lap].

An Uzbek woman, Qaramqul

Most respondents knew that children should be fed breast milk until they were two years old, and did so. A few Turkmen families added that breastfeeding should continue for more than two years. (Interviewers observed this practice during the qualitative consultations when a young child cried, even if it was older than two years, the mother would put the child to her breast.) Most believed that breastfeeding was good for a child's growth and development, saying that it made him/her strong, especially in the bones. While most family members said they received information about breastfeeding from health clinic staff, some mentioned that *mullahs* (religious leaders) recommended breastfeeding babies for two to three years.

Mothers breastfed fed their babies whenever they cried, many times a day, from both breasts. Most mothers and family members knew that mothers should eat more when they were breastfeeding, and most mothers did so. Observations showed that some mothers did not know how to breastfeed properly, and so thought they did not have enough milk. A few mothers with little breast milk asked other lactating mothers in their neighborhoods to breastfeed their babies for them.

The main reason for stopping breastfeeding before the child turned two was because the mother became pregnant again. Many women said that they would stop breastfeeding their child under two if they became pregnant again, although a few Uzbek mothers continued to breastfeed even while five-to-six months pregnant. A few interviewed women were already pregnant again, and had stopped breastfeeding. Many families believed that once a woman was pregnant, breastfeeding would harm the unborn baby (especially boys, according to some), and also sometimes the young child. Many husbands also mentioned that mothers should breastfeed as long as they had milk or until the next pregnancy. One Uzbek mother in Qaramqul said, "I give breast milk until I know I am pregnant. When the baby moves (inside) I know I am pregnant. I cut off my milk; otherwise it is harmful for the [breastfeeding] child."

Some mothers mentioned that they breastfed *sheer-ba-sheer* (from one child to the next) with no break. A few mothers breastfed both the newborn and the previous child. One Turkmen mother in Andkhoy said, "I give milk for two or three years, or I give milk until the next pregnancy. I bear children one after the other. I separate (wean off) one child from milk and then take another."

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[24] This is a reference to Islamic teachings that boys should be breastfed for two years and girls for two and a half years.

4. Most mothers breastfeed their babies "many times" a day.

I give milk ten times in the day and three times at night. When the child is crying, I know he's hungry. When my child cries, I use my breast to keep him quiet. I don't have any other way of making the child rest. When I breastfeed, I put the child to my breast for less than one hour. I give milk from both breasts so that his stomach fills.

An Uzbek woman, Qaramqul

Of the interviewed mothers who were breastfeeding at the time of the survey, most breastfed their children under two years of age many (five to eight) times a day, and each time for more than half an hour. Many mentioned they breastfed every time a child cried (day or night), a practice that was also observed during the qualitative consultations. Most mentioned that they breastfeed from both breasts to ensure that a child was full and to ensure each breast was empty; some breastfed until the child went to sleep or did not want any more. Some mothers breastfed six or seven times during the day, but not at night, and said they sometimes used sleeping medicine to make sure their babies slept until morning. A few Uzbek mothers said they coaxed their babies to feed and if the babies seemed agitated would make happy sounds, lie down next to them, kiss them, and try to get them to breastfeed. A few mentioned continuing to breastfeed when a child was ill.

When asked about what they thought affected the amount of their milk, a few mothers who had produced less breast milk reported that they noticed an increase in the amount of their breast milk once they started breastfeeding many times a day. One Uzbek mother in Qaramqul said, "My milk [quantity] is good now. I used to give other [powdered or animal] milk to my other children because my milk was not so much. But now I don't give other milk. Every time when the child gets hungry, I give my own milk. The more I give, the more my breasts fill up with milk."

5. Most mothers linked their own diet to the quantity and quality of their breast milk and also to child health.

I did not breastfeed for three days because I wanted to remove filla *from my breasts. But I also didn't have much milk. I was hungry and we did not have anything to eat. I begged for flour. After I made bread and ate, my milk came.*

An Uzbek woman, Andkhoy

If I eat a lot, my milk increases and I give one breast to one of them [twins] and the other breast to the other. My husband brought half a kilo of meat and I ate shorba *four times that day. If I eat a lot, my milk increases; if not, it gets less. Sometimes, if I don't eat and I give milk to both of my twins my eyes get dark and I feel weak.*

A mother of twins, Andkhoy

I eat food a lot to increase my milk. I am a mother, and I have to give milk to my baby. My family says that I should eat a lot and whenever I feel hungry I should eat. Whenever I eat, I also drink liquid. This increases my milk. I eat hot food such as akta *(a special porridge for breastfeeding mothers made with whole wheat grains, flour, and sugar),* peyawa *(a special soup for breastfeeding mothers with beans, lentils, rice, and often meat), and egg after delivery, and after some weeks, I eat soft mutton. I don't eat cold food, cold water,* aash *(a special soup made with pasta, beans, chickpeas).*

An Uzbek mother, Andkhoy

My milk was good when I had my first child. I don't know why it gradually got less. It is less with this child [a girl]. I go to weave carpets and earn some money. I'm always thinking about what we will eat today and what we'll eat tomorrow—with these worries, my milk decreased. Our life goes on only with my gharebi *(labor).*

A Turkmen mother, Andkhoy

Most respondent mothers felt their own diets were related to the quantity and quality of their breast milk and to the health of their children. Most mothers reported that if they ate more food, at the prescribed three times a day, they would have more breast milk. Some mothers complained that they did not have enough breast milk, mainly because they were poor and could not eat enough food, or ate only bread and tea. Most mothers said they had learned about the importance of their own nutrition from clinic staff. Husbands and mothers-in-law encourage mothers to eat more to help breastfeeding.

Beliefs about the effects of "hot" and "cold" foods influenced what breastfeeding mothers ate, although researchers found beliefs and practice varied. In the first day or two after delivery, some mothers ate "hot" foods to encourage the flow of breast milk, to clean their wombs by stimulating vaginal discharge, and to cure post-partum fevers and shivers. They then began to consume more "cold" foods to keep the flow of breastmilk good, but maintained a mix of hot and cold foods. During the *chilla* period, most mothers followed a restricted diet with no eggs or meat (thought to cause diarrhea and stomach ache in the breastfeeding newborn). They drank tea in huge quantities, but avoided water because they thought it would cause infection in the womb and swelling of the stomach *(gazak)*. This belief about water causing infection of womb was also reinforced by some traditional birth attendants and, in some cases, by clinic staff. This restricted diet may affect the health of mothers at a time when they are breastfeeding as well as recovering from the stress of the delivery.

Most lactating mothers continued to follow a regulated diet to promote children's health and prevent illness. Mothers felt that eating too much cold food could lead to a reduction in breast milk production, give a child "green diarrhea," and/or cause the child's chest to catch cold, potentially causing acute respiratory infection. Too much hot food could lead the child to develop diarrhea, stomachache, gas, pimples, or rash. Those who could afford it ate soft rice, soups, lamb, and a lot of oily food. Many lactating mothers also ate *jawaanee baadiyaan*, an herbal seed usually mixed with aniseed to prevent breast milk from becoming gaseous. Some women thought that their eating watermelon and *pulao* (a rice dish) would cause diarrhea in their babies. Some fathers mentioned giving their wives camel meat to increase breast milk production.

Examples of Cold and Hot Foods

Cold foods	Medium foods	Hot foods
Rock sugar (*nabat/qand*) Sugar (*shakaar*) Almonds (*badaam*) Raisins/currants (*kishmish*) Watermelon (*tarbooz*) Onion Some types of lentils Some pasta dishes (*aash*) Rice Broth Sunflower (*pakistani*) oil	Lamb/mutton	Pumpkin, melon (*kharbooza*) Beans (*lubia*), lentils *(mash)* Eggs (also thought to worsen jaundice in newborns) Sesame (*kunjed*) oil Some pasta dishes (*aash*) Walnuts (*charmaghz*) Camel meat, beef, chicken Soup with meat Fat (e.g., *roghan-e zard*), butter *Pulao, Laiti* (a porridge) *Akta, Peyawa*

6. Some families linked mothers' health to the quantity of breast milk.

Thank God that I have milk—whatever I eat turns into milk. If I worry, my milk gets less. A few months ago, my 12-year-old son fell into a pond and drowned. Because of this, I worry a lot. That's why my milk is less.

An Uzbek mother, Andkhoy

I have enough milk—it even falls out of the baby's mouth. But it was more with my other children—I don't know why it's less now. Maybe it's because of my weakness or maybe it's because one of my breasts is small and has slowed down.

An Uzbek mother, Andkhoy

Many mothers who had more than three children complained of weakness and reduced breast milk, and mentioned that with every child their milk quantity became less. Many also said that when they were sick they would follow a restricted diet that would decrease their breast milk. A few complained that their breasts had dried up. A few mothers mentioned that depression and worry reduced their breast milk. Some fathers mentioned that their wives were weak and ill and therefore produced less breast milk.

7. Some families said that supernatural powers affect breastfeeding.

While a few mothers felt that their low breast milk production was God's will, some believed that jealous women cast the evil eye (*saya* or *nazar*) on lactating mothers, who therefore produced less milk. Some also believed that *nazar* could make children stop breastfeeding. Several nursing mothers and their husbands said they regularly got prayers and amulets (*taweez*) from *mullahs* to cast away the evil eye.

8. "Real" weaning starts when the infant is five or six months old; most weaning diets include high-carbohydrate, low-protein foods and foods of little nutritional value.

We give the child food that we ourselves eat. Anytime the child wants [it], we give him food because a hungry child is more powerful than a king. The child makes us accept anything he wants.

A Turkman father, Andkhoy

They [health clinic staff] show a cloth [flipchart for health education] in the hospital and they teach us. I don't know what they say, but they show Afghan women making food for children. We are not that kind of women, and we don't make special food [for babies].

A Turkman woman, Andkhoy

I didn't give my older children solid food to wean them off—they started eating themselves. I thought if I gave them food their stomachs would get big. Now, they tell me in the clinic that I must given my son food after six months. My other children are thin because I didn't give them food. Now I know that food is good for children and keeps them healthy.

A Turkmen mother, Khancharbagh

I put some yogurt on a plate and add pieces of bread. I also give peyawa, shola, shorba, *and soft food, cream, and* shir berenj *(a sweet dish made with rice, sugar, and milk). I don't give* ***pulao*** *or meat as they are hard foods and upset a child's digestion. His grandmother helps me—we feed with hands and sometimes with spoons.*

A Turkmen mother, Khancharbagh

We start giving food when a child is a year old. We give them foods like tea, water, biscuit, grapes, melon, watermelon, and powered milk (shir podai). *We give potatoes, soup, and* shola *(rice porridge). I chew mutton well and give it to my child. We start after a year so the child will grow healthy. Usually mothers and grandmothers decide what to feed them. We also give bread, cow's milk, and* nabat. *Whenever the child feels like eating, the mother feeds him or her in a separate plate.*

A Turkmen father, Andkhoy

Most respondents mentioned that their children received real complementary food, including family food, when they were five to six months old. (By interviewees' definition, real food does not include the soft food that most babies less than four months receive.) Children are then *dastak cha*—able to eat. Mothers continued to provide milk (breast, powdered, or animal) during this period. Many mentioned that they started weaning at five to six months on the advice of health clinic staff. A few mentioned that food should be introduced as early as three to four months after delivery, while a few mentioned waiting until a child was as many as 16 months old. Those families who delayed introduction to complementary foods (past five or six months) waited until a child demanded food itself or moved towards food.

When mothers weaned their children, they continued to provide milk: either breast milk, if they were breastfeeding before, or powdered or animal milk. A few fathers believed that children who got enough breast milk didn't move toward food. In addition to the times a mother breastfed her child, most families fed their weaning child three times a day (usually when the family ate) and also gave the child biscuits or bread at other times of the day if the child indicated that s/he was hungry by crying or by moving towards food. Some parents indicated that, in addition to drinking breast milk, weaning children should be fed three to four times a day in summer and twice a day in winter.

A few mothers and their mothers-in-law decided when to start weaning the child, and started weaning when they thought their milk is not enough. As one Turkmen mother from Khancharbagh explained, "She was four months old when I gave food because my milk was not enough." Some fathers also had an influence; according to one Uzbek mother from Andkhoy, "After six months I gave food like soup, rice, and cereal. Her father said to give it quickly so that she can grow up."

Respondents fed their children family food, sometimes made soft for them. This is mostly because they did not have the time to prepare special foods, and they did not see it as necessary. As one Turkmen mother from Andkhoy explained, "We don't cook any special food for them; we are not unemployed!"

A few families with cows started giving children buttermilk (*chaka*) at three months. Most families fed four-to-six month old children *shola*, *luhab-e berenj*, soup, and *kitcheri* three to four times a day. Older children are fed *pulao*, *shola*, soup, soft rice, biscuits soaked in tea, *shorba*, *firni*, yogurt, and potatoes. Some families said they fed children camel's meat, and a few fathers said beans provided babies with energy.

As in the case of lactating mothers' diets, beliefs about food and its effects were varied. Turkmen respondents identified potato, camel meat, shola, and soup as good for weaning children. Beliefs about foods had to do with hot and cold effects and with digestibility; in general, eggs and meat were avoided

because of their "hot," "hard," and/or "strong" effects. Some respondents indicated that they did not feed their weaning children "hot" foods in the summer, or "cold" ones in the winter. The table below shows some beliefs expressed about the negative effects of certain foods on weaning children.

Foods	**Their negative effects**
Kichri, *nask* (not identified) (Turkmen)	Hard for babies to digest
Sugar (Turkmen)	Causes babies stomachs to distend
Meat, meat soup	Is oily, has "hot" effects
Egg	Has "hot" effects, can cause jaundice, can make a child deaf, "make a child's age short"
Yogurt, biscuits soaked in cow's milk, grapes	Have cold effects
Halwa, *aash*, rice, eggs, grapes, *aash khamir* (Uzbek)	Cause diarrhea
Eggs, beef, potato, water, tea	Make a child's stomach weak
Shir berenj	Give a child a pot belly
Fish	Has a hot effect, causes gas
Tomato	Causes diarrhea

A few Turkmen parents referenced the preventive characteristics of some foods. They fed their children apples, watermelon, melon, and grapes to prevent jaundice, diarrhea, and other sicknesses.

Interviewers asked all in-depth interviewees what they had fed their children in the previous 24 hours. Mostly, mothers reported giving their children boiled water, sugary tea, melon and watermelon, soup, *kichri* (soupy rice with pulses), bread, rice, potatoes, yogurt, and animal or powdered milk, cookies and wheat biscuits. A few mothers reported having fed their children cooked okra, *qorma kachalu* (potato stew), grapes, pomegranates, and apples. The described diet is high in carbohydrates and low in protein, and may contribute to acute and chronic malnutrition within this age group.[25]

9. Feeding practices make food manageable for weaning children.

Children being weaned generally ate with the family at mealtimes, and were given biscuits and bread at other times of day. While older children usually ate from their mother's (or sometimes grandmother's or father's) plates, food prepared for smaller babies was served on a separate plate. Family members said they made sure the food was soft, and broken into small pieces for the child. Some mothers reported chewing the food first before giving it to the child. Children were given food by hand, without using utensils (typical of normal eating methods). Although this is positive because it shows that the food is made into manageable portions for a child, it is possible that if family members do not practice good hygiene, dirty hands might cause illness. This research did not include specific questions or observations about hand washing or use of soap.

Many mothers talked about how their children left a lot of food, and did not eat enough. In a few cases, mothers tried to push their babies to eat. But mostly, feeding was not active, and mothers said that the child ate until s/he was no longer hungry.

[25] These results are comparable to the WHO study, which found that babies were started too early on inappropriate foods such as non-human milk and biscuits, and when other food were introduced they were very poor in iron. Food rich in iron, such as meat, eggs and beans, were not used at all.

10. Family members play important roles in women's and children's food consumption.

My husband says, "Because you give milk, eat more."

An Uzbek woman, Andkhoy

Mothers-in-law played an important role in deciding what lactating mothers should eat, although their recommendations varied. Most encouraged the mother to eat more while she is breast feeding, and especially oily food. In many cases, husbands also took an interest in giving good food so that mothers could produce more breast milk.

Mothers, grandmothers, and older children normally helped mothers feed children. Sometimes, elderly grandfathers who were in the home helped to feed children, but fathers rarely fed their children. Usually, fathers bought raw ingredients from the market, and in a few cases fathers reported that they helped feed their children. A few fathers did not know what their children ate. They mentioned that it was the mother's role to decide what to give a child to eat. One Turkmen father from Qurghan said, "The mother does everything (for the child). I don't take part. During a child's sickness, I discuss [with the mother]. Otherwise it is not my duty." Mothers said they sought advice from their mothers-in-law, other elderly women in the neighborhood and, many, from health clinic staff about what to feed their children.

As many mothers wove carpets, family members also helped to look after children while mothers were working. A few mothers with less family support put their babies' cradles next to them and rocked the babies while they worked. (Note: a few start weaving carpets ten days after delivery.)

11. Many mothers continue to breastfeed when their child is sick and supplement the child's diet with soft or milky dishes.

Whenever the baby cries, I give milk; at night, too. When she was well I was giving milk. Now that she is sick, I am still giving her milk; I give more milk. I weave carpets, and whenever she cries, my mother-in-law calls me. I have enough milk, and I can feed her whenever she wants.

A Turkmen woman, Andkhoy

When the child gets sick, the mother breastfeeds and gives biscuit and watermelon. We also give soft foods like shola *(soft lentils and rice mixture), soup,* luab *(mashed)* shola, *tea, and water. During the child's sickness, we make less food because eating is hard and the child's stomach can't digest. Mothers know what to feed. Sometimes we ask neighbors or get advice from clinic doctors. When the child gets better, we give food that gives energy like meat,* pulao, shola, *and eggs.*

An Uzbek father, Qurghan

If a child has diarrhea or fever, we give medicine and ORS. We also give Fanta, watermelon juice, and boiled water. Watermelon is good as the child feels strong.

A Turkmen mother, Khancharbagh

Families know that sick children need special feeding, including increased breastfeeding, and few continued to feed them normally. Only a few family members did not mention increasing breastfeeding when the child is sick. Although mothers reported trying to breastfeed their infants when they were sick, many reported that their sick infants did not drink much breast milk.

Most families gave soft food and boiled water to sick children, although a few mothers said that giving a sick child food could make its condition worse. Soft food includes soaked wheat, soaked biscuits, and soups. Families avoided giving food like rice or eggs, which they believed to be hard foods, because they believe the child would have difficulty digesting them. These families reported supplementing the sick child's diet with milky dishes like *halwa* (coarse grounded wheat, sugar and oil) and *ferni* (a boiled-milk sweet dish), and with powdered milk, as well as increasing the child's intake of boiled water—all positive practices reinforced by health education messages at local clinics. Families also believed that sick children experienced loss of appetite, and so they said they tried to coax them into eating by clapping their hands, or talking to them. A few mothers prepared more food than usual when the child was recovering from an illness. It was also noted that some fathers took part in feeding sick children. A few mothers said they did not give sick children solid food as they believed it could make them sicker or kill them.

Many families mentioned giving their children oral rehydration solution (ORS) if they had diarrhea. A few fathers mentioned that mothers fed children sugar water (*nabat*) and chickpea soup when they had pneumonia (*sina baghal*) or cough (*surfa*), and watermelon juice when they had measles (*surkhakan*) or diarrhea (*ishal*).

While some families gave recovering children more food than usual, others fed according to the child's appetite. Families also reported giving their children vitamin-rich fruits to help them recover from illness, which is another positive practice; several respondents reported feeding recovering children fruits such as pomegranates, oranges and apples. Grapes were avoided because of the belief that they would make babies' stomachs distend.

12. <u>Most mothers consult their husbands and mothers-in-law when their child is sick, and take the sick child to a clinic.</u>

Almost all families indicated that they went to the clinic if their child was ill, and most fathers gave permission to their wives to go to the clinic alone; this may relate to the fact that the health care infrastructure in the Andkhoy area is relatively well-developed and long-standing. Many respondents, especially fathers, reported taking their newborns to the doctor in the first few days after birth in order to get them vaccinated or checked by the doctor. And, when their children got sick, most mothers consulted with their husbands and mothers-in-law, and also with neighbor women and traditional birth attendants. Most took their sick children to the health clinic. Some (also took their sick children to *mullahs* or religious healers. Those who went to the clinic reported giving their sick children the prescribed medicines. Aspirin or ORS were the identified medicines, but in some cases the medicine was unidentified.

13. <u>Many families use home remedies or other traditional approaches on sick children.</u>

> *When my child became sick I took her to a* unaani *(homeopathic medicine) doctor. She greased the child's hands with Vicks™ to make the veins of the child's chest soft. The child became better. Another time I took my first child to this woman; she made some small cuts on the shoulder with a razor blade and took out the unclean blood. I myself don't have any special idea about this, but this is common in the village. They do this because there is a sickness called* ifti *(a disease which causes the blood of the child go bad), which, if not treated, can kill a child.*
>
> An Uzbek father, Andkhoy

Many families used home remedies to treat sick children, and some sought the advice of neighbors, elderly women and *mullahs*. The research did not investigate the positive, neutral, or negative effects of these practices. Respondents identified a number of home remedies for small children, including:

- *For fever*: aspirin in *roghan-e zard* (fat/oil) or in breast milk fed to the child; eggs mixed with salt in a paste for the child's head; raw grape juice (*jal*), water, boiled rice, and salt in a paste for the child's entire body; boiled *reshqa* (grass) rubbed on the child's body or eaten in a *mantu* (dumpling); yogurt mixed with dust and rubbed on the child's head; *taq* plant[26] leaves or *shola* rubbed on the child's body to induce sweating; *taryaq/kooknar* (opium) rubbed on the child's neck.
- *For diarrhea*: egg yolk massaged on the child's nipples; yogurt mixed with *gul-e zard* (a yellow flower) fed to the child; boiled egg mixed with pomegranate peels fed to the child; a mixture of yogurt, *tak* leaves, and pumpkin leaves in a cloth buried in embers for five minutes, then mixed with pomegranate peel and fed to the child.
- *For abdominal pain/constipation*: gripe water, *khamir tursh* (fermented dough used as yeast) placed on the child's navel.
- *For pneumonia* (*sina baghal*): onions fried in oil fed to the child or rubbed on the child's body.
- *For cough*: boiled opium fed to the child.
- *To ease breathing/make the chest "soft"*: menthol cream (*vicks*) massaged on the child's chest or hands, *khamir tursh* on the child's shoulders.
- *For a blocked nose*: a few drops of boiled opium in the child's nose; a drop of mother's milk in the child's nose.
- *For earache*: oil of fox mixed with water in the ear, dry tea leaves in the ear; two drops of *kunjed* oil in the ear; oil, in which an egg is fried burned and then discarded, dropped in the child's ear.
- *For headache*: *taryaq* (opium) rubbed on the neck.
- *For jaundice*: *khulfa* (a kind of wild grass) plucked in small pieces while praying and put in the sun.
- *For measles*: hot foods fed to the child to encourage the rash to come out; burn *asfan* (an herb) in the house; place knives under child's bed to frighten *jinns* (spirits) causing measles.
- *To encourage breastfeeding*: menthol cream (*Vicks*) massaged on the child's chest.
- *To increase appetite*: opium rubbed on the child's nose and forehead.
- *To encourage sleep*: *taryaq/kooknar.*
- *For "bad blood" or ifti* (a disease that causes the blood of the child go bad): traditional healers cut small wounds into the child to expel bad blood.
- *Against the evil eye*: *taweez* (amulets) from and prayer by *mullahs;* burn *zamch* (an herb used to preserve meat) and seven pinches of flour and rub on the child's hand; *khulfa* plucked in small pieces while praying and put in the sun.

14. Use of opium seed and poppy seed to make babies sleep is common.

If I didn't give taryaq, *I wouldn't see day or night. I give* taryaq *once in the morning and once at night.*

An Uzbek woman, Qurghan

No, I don't give taryaq *(because it is bad for the child). The neighbors gave* taryaq *and now the child's nervous system is bad.*

A Turkmen woman, Andkhoy

[26] The researchers were unable to identify the English translation for *tak*.

In addition to rubbing *taryaq* on their children when they are sick, many mothers reported feeding their babies *taryaq* when they cry a lot or when parents wanted them to go to sleep. Interviewers also observed this practice during several qualitative consultations, and many fathers also reported this practice. One Uzbek woman from Andkhoy told us, "Until the child is three years old, I give *taryaq* to him to go to sleep; otherwise I cannot work [make carpets]." Only a few women knew that giving opium was harmful to children. One Uzbek woman from Qurghan said, "I gave *taryaq* to my other children to go to sleep, but I don't give it to this child because they told me not to in the clinic."

The high use of opium and poppy seed for babies is a worrying finding because it can easily decrease their appetites, and can lead to harmful addiction. This finding appears to be unique to the Andkhoy area, and was not found in other areas where UNICEF and WHO did research. It is probably a consequence of mothers needing to work on weaving carpets for long hours in the day, and thus needing to keep their babies quiet.

15. <u>Knowledge and caregiving behaviors probably affected under-two nutrition more than the drought.</u>

> *Before the drought, our babies were fat and healthy, but when the drought came our babies could not eat properly and they became thin and weak.*
>
> A Turkmen father, Khancharbagh

> *There were changes in our food. Before [the drought] I would eat oily food. Since the drought started, nobody is buying carpets. Even if a carpet was sold, we got little money for it, which is not enough because our family is big.*
>
> An Uzbek mother, Andkhoy

> *Beans, oil and sugar were distributed recently [at the clinic] so the mothers' diets are good.*
>
> Participant, focus group discussion

> *When the clinic gave beans, we gave them to our child.*
>
> An Uzbek father, Qaramqul

> *Three years back it was really bad. It was hard for children and old people. Children needed food and their fathers and mothers couldn't prepare it for them. The children were used to bread, and where could we find it? We had only half a* seer *or one* seer *(7 kgs) of wheat that we bought from the bazaar twice a week. We cooked rice. Food was really expensive and men didn't have jobs. Compared to three years ago, it's good now—men have jobs and cultivation is good.*
>
> A Turkmen mother, Arab Shah Paeen

> *The past three years of* khushksali *(drought) shook the earth and sky. We sold our sheep and we sold our three cows and we also sold two camels. We then sold our cart. First of all we sold the donkey. I sold all my jewelry. We sold our two chickens. We sold everything to pass the difficult time. Now we are happy and our life is getting good because the* akwan motahida *(United Nations) helps us.*
>
> Unknown source

The people of Andkhoy were affected by the drought in a number of ways although this previously prosperous area seems to have had enough resources to avoid large scale acute malnutrition and permanent economic damage. Most respondents talked about the drought in the last three to four years, and how they were worse off during these years. Many Andkhoy area families sold their furnishings,

Research Findings on
BREASTFEEDING AND WEANING BELIEFS AND PRACTICES

♦

Andkhoy, Khancharbagh, Qaramqul, and Qurghan districts
JAWZJAN PROVINCE, NORTHERN AFGHANISTAN



Photograph by Richard Lord

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SC/US welcomes feedback on this report and its usefulness to other humanitarian and development assistance agencies. This report is produced by SC/US's Afghanistan Field Office staff. The primary investigators were Rolla Khadduri, Dr. Tariq Ihsan, and Dr. Syed Ahmad Gawhary.

rugs, jewelry, and other household items as well as their livestock to get money for food, or borrowed it. Because they had less income, they could not buy as many medicines either. People suffered not only from the loss of crop cultivation and sale of livestock[27] and household items, but also from a slowdown in the local carpet economy on which many of them depend. Some migrated to Pakistan, where they sold carpets because the carpet market collapsed in Andkhoy. A few Turkmen mothers mentioned that their farmer husbands started to work as soldiers. A few Turkmen fathers mentioned that they had always been poor, but drought made life even more difficult for them because they could find no work. Only very few better-off people were not affected by the drought, and they gave charity (*zakat*) to help the poorest people.

Respondents indicated that the drought and its follow-on effects did affect diet in the area. Mothers reported not being able to give their children fresh milk, butter, or yogurt, and a few Turkmen mothers said that their most recent child was thinner and weaker than earlier children because they weren't able to eat good quality food such as *aash kamir*, *kitchri*, *shakaar* (sugar), soup, *nabat*, and *roghan-e zard*. They started mixing potato with bran and used it as bread; some fathers reported their families began to eat corn (*jawari*) and millet (*arzan*), which are viewed as poverty foods. Some middle class people reported that during the drought they could not eat meat or oily foods for several days at a time because they could no longer afford them. According to one mother, "We sold our cow and sheep because there was no grass. The children didn't have meat or milk for three years."

Many respondents reported that nursing mothers' milk was less during the drought, mainly because mothers had less to eat. Most respondents also talked about not having enough food for their children, especially fruit and other varieties of food. A few mentioned that a lot of children had died during the drought, but no confirmation of these assertions was available. Although the research did not specifically address this, SC/US staff feel that the drought in the Andkhoy area did affect access to water and the quality of water (it was much more saline than normal). This may have had an effect on hygiene practices and the subsequent increased risk for disease in children, contributing to the cycle of disease and malnutrition.

However, it is possible that the drought did not have a particularly negative impact on children under two. All FGD and IDI respondents were assisted during the drought years by SC/US food distributions (especially those targeting pregnant women and lactating mothers); the food distributed to pregnant women and lactating mothers included oil, beans, sugar, and iodized salt. Many respondents, both female and male, talked about the help of international organizations in providing food for work projects, and in providing complementary food items for mothers and children. Some families said that they had sold this food to buy other necessary items, others that they and their children had eaten it and that it was very helpful.

Even though this research was conducted during the first *non*-drought year, food variety was still limited for children during the weaning period. It may be that malnutrition is related more to general child feeding practices, rather than to the drought and general food security issues. Families do not have the knowledge that protein is important for the child, or what the important sources of protein are.

All agreed that the situation had improved in 2002, when the rains came. Several did say they were still suffering from the effects of the drought because they had sold their livestock or seed, and therefore could not cultivate the land.

[27] The availability of livestock products was heavily affected by the drought when people sold their livestock because they could not feed or water them, or because they needed money. Clearly, the sale of livestock has a more long-term effect than the lack or loss of agriculture because it takes far more time to rebuild livestock-related capacity than to replant crops.

Conclusions & Recommendations

This qualitative study sought to provide a better understanding of the determinants of nutritional status of children under the age of two years in the Andkhoy area, focusing separately on breastfeeding and weaning practices for (1) infants under four months and (2) those between four months and two years of age. This study is one of three studies conducted in Afghanistan in recent years that focuses on child feeding issues; the other studies included a 2002 study conducted by WHO in IDP populations in Kunduz; and a 2003 UNICEF/MoH study in the Panjshir.

The results of the three studies are similar, despite their having been conducted using somewhat different tools and methodologies (the SC/US and UNICEF studies had some overlap) and among very different communities in different areas of Afghanistan. This indicates that the general trends on practices related to breastfeeding and weaning Afghan infants are known. Given that malnutrition, especially in young children, is an issue of public health concern in Afghanistan, there is an ethical responsibility to use this data and information to develop programmatic interventions that address the key issues raised by the three studies.

The Andkhoy MoH and SC/US are using the standard MoH/UNICEF breastfeeding research flipchart to conduct health education in the seven-year-old Andkhoy area Primary Health Care (PHC) program. The results of this research show that the health education within the Andkhoy PHC program has had many positive effects, including: such as generally good health-seeking behavior and feeding practices when the child is sick; introduction of weaning/complementary foods between the age five and six months; use of colostrom by just over half of families; and family knowledge that breastfeeding is good for children and should be continued for two years.

However, the research has also brought to light important nuances of breastfeeding and weaning beliefs and practices at the family and clinic levels in the Andkhoy area that were not previously understood in detail. For example:

- clinic practice may encourage families to give pharmaceutical glucose to their newborns;
- health education messages about exclusive breastfeeding have not made clear that this means no water at all, even in the hot summer months, except when the child has diarrhea and when ORS is needed;
- health education has not emphasized the *types* of complementary foods that should be given during weaning;[28]
- community health workers have not been trained how to counsel mothers on appropriate breastfeeding practices; and
- important hygiene messages about hand-washing before feeding children have not been emphasized.

Although further research may achieve greater understanding in specific areas, it is perhaps more important to work quickly on the findings now available. These findings lead to a number of recommendations for improving breastfeeding, weaning, and feeding information in support of young children's health:

[28] For example, it would be interesting to look at cultural understandings about cold and hot foods, and hard and soft foods, and to think about messages that emphasize nutrition.

1. <u>Develop health education/counseling messages about breastfeeding and weaning that take better-understood beliefs and practices into account.</u>

Health education material using these messages should be developed on a national level using the findings of the three studies to help conceptualize and articulate key messages, and to tailor educational materials to target audiences, e.g., mothers-in-law and fathers as well as mothers. To advance this recommendation, SC/US suggests a series of national discussions involving the Ministry of Health, SC/US, UNICEF, WHO, and other organizations with experience in the field. Based on the findings of SC/US and other research, five key messages could address the following topics:

- Immediate breastfeeding, with colostrum
- Exclusive breastfeeding without the need for water or supplementary food
- Counseling on positioning the baby for effective breastfeeding
- Weaning at four to six months with nutritious, protein-rich complementary food
- Good hygiene for all family members feeding babies and young children

In preparation, there should be a collection and review of breastfeeding and weaning educational materials and messages currently used by organizations in Afghanistan. Following the development of standardized national health education material and suggested modes of effective and appropriate communication, there needs to be dissemination of this material to all appropriate government health facilities and personnel along with a plan for appropriate training to ensure that recipients of the material understand, accept, and can convey the messages.

During the analysis, investigators found little difference in responses between people of Uzbek and Turkmen ethnicity. Also, key practices found in this study are similar to those found by the WHO and UNICEF/MoH studies conducted in different areas of Afghanistan and researching communities of varied ethnicities. Thus ethnicity does not seem to be a major factor influencing breastfeeding and weaning practices. This may make it easier to develop health education material at a national level for Afghanistan.

2. <u>Target messages broadly—at mothers, other family members, and influential community members.</u>

The findings if this research suggest that breastfeeding, weaning, and feeding messages should be targeted broadly. Messages about colostrum should be directed not only at mothers, but also at other influential women in the family (such as mothers-in-law and sisters), and fathers, all of whom were seen to have a major influence on the decision to give or discard colostrum. Women who reported being shy to breastfeed in front of others as the reason for their delay in immediate feeding were young or first-time mothers. When addressing the issue of immediate breastfeeding in programs, it is important to target mothers-in-law and other senior female members of the family, who are all normally present in the delivery room and help to look after the newborn. They can then help to influence the young mother positively, and encourage her to breastfeed the infant immediately.

Messages on feeding should target all family members, since many are involved in feeding the child – especially older siblings and mothers-in-law. In the Andkhoy area where many women weave carpets, these family members are also involved in helping to look after the child when the mother is busy working, and may have more contact with the young child than in other geographic areas. Fathers should also be targeted in health education messages about complementary food, because they buy food from the

bazaar. Fathers should also be included in activities targeting danger signs for illnesses, since they are involved in the decision-making process of if and when to take the sick child to the doctor.

The MoH and UNICEF are already discussing including breastfeeding, weaning and related topics as part of the Community Health Worker (CHW) training curriculum, after which CHWs would do home-to-home visiting with women where possible. Other suggestions have included addressing the issues of breastfeeding and weaning through health education, individual breastfeeding counseling, awareness-raising among pharmacists about problems associated with bottle-feeding instead of breastfeeding, engaging *mullahs* and other influential community members as advocates, and using radio spots.

3. Use local knowledge that supports positive practices in messages and other outreach.

Messages may be more effective if they are tailored toward common, well-understood analogies – for example, by saying that colostrum is the first vaccination for the child or by reminding families that farmers know that the cow's first milk is best for the calf. Reminding people of positive messages in the Qu'ran is also a good strategy. For example, health care workers can build on the positive common belief that children should be breastfed for two years[29] to promote birth spacing, which is beneficial for children and their mothers. They can also incorporate families' knowledge about the importance of mother's diet and terms used for different foods within the existing birth planning/preparedness health education and counseling messages.

A potentially powerful strategy for building on positive local knowledge is the positive deviance model. The positive deviance model is used to identify a beneficial practice within the community, and then propagate this practice to others in the community by showing, first, why and how it is beneficial, and then that it is locally feasible and acceptable. The experiences of women who do give their newborns colostrum can be incorporated within the existing health education messages and activities and used as examples for other families. The fact that approximately half the women interviewed did give colostrum to their newborns shows that there are role models who might help change colostrum-giving behavior in these communities.

4. Challenge/correct misconceptions about immediate and exclusive breastfeeding and about weaning foods and offer ways to improve diet diversity.

This study found that respondents held a number of misconceptions about, or have different ways of understanding, diet and nutrition that have implications for children's nutritional status. For example, the fact that just under half of the respondents said they discarded colostrum because they felt it was unhealthy indicates that substantial work must be done to correct this view. The study also found a general misunderstanding as to what giving *only* breast milk means and beliefs about the need for extra water, glucose, or soft foods for newborns need to be addressed.

The findings also suggested that many families do not feel that weaning age children need special food, nor do many feel they have time to make them, and the weaning foods families deem most appropriate for their children may not be those that are most nutritious for them and perhaps perceptions of soft and hard foods need to be balanced with information about their nutritive value and suggestions about appropriate, quick, and inexpensive weaning food possibilities. Providing information about diet diversity and children's (and adult's) nutrition needs may not be enough in some contexts, and assistance actors will need to consider ways to encourage and facilitate conditions for diverse and healthy diets.

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[29] According to one Islamic teaching.

5. <u>SC/US and the MoH should work together to address Andkhoy-specific issues.</u>

One important issue specific to Andkhoy that was confirmed by this research is that of providing opiates to children when they are ill or to make them sleep. Messages should discourage the use of *taryaq* when the child is well or sick.

The research also helped look at different home remedies for sick children, which can be classified as harmful or neutral. While there is a need to identify and discourage the harmful practices and ignore the neutral ones, more exploration is needed to identify helpful practices, especially for the sick child management at home. Caretaker counseling that supports and praises the family's helpful practices can help discourage the harmful ones.

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Executive Summary

Since 1996, SC/US has worked in partnership with the Ministry of Health to strengthen the quality and expand the coverage of primary health care services, focused on maternal and child health, in Andkhoy town, its subdistrict Qurghan, and neighboring Khancharbagh and Qaramqul districts in Faryab Province.

In late 2000, SC/US began to respond to the drought in Afghanistan, and through late 2002 (and to a lesser extent, into early 2003) implemented food distribution, nutrition education, income generation, and nutrition and food security surveillance activities in Faryab and Sar-i Pul provinces. In conjunction with its nutrition surveillance activities, SC/US conducted qualitative and exploratory research on breastfeeding and weaning practices for children in the Andkhoy area from August 1 to 14, 2002. Through the study, the researchers sought to learn about breastfeeding and weaning beliefs and practices for children under the age of two, and if and how these practices had been affected by the drought. Although the findings of the study lead to additional questions and topics for investigation in addition to a series of recommendations, they suggest that it will be important to act quickly to identify new—and re-target old—health education messages to improve the nutrition and health of children under the age of two. The study found:

Breastfeeding is prevalent, but many people do not understand the concepts of immediate and exclusive breastfeeding—with probable negative health effects on children under two. While we know that newborns should be breastfed as quickly as possible after birth, or at least within the first eight hour, most of the mothers interviewed initiated breastfeeding eight to 24 hours after delivery. Only slightly over half of the respondents fed their newborns colostrum. Some viewed colostrum as dirty or sour milk, or possibly not milk at all, and it seemed that some people made a distinction between feeding a newborn colostrum and breastfeeding (feeding with the thinner white milk that comes two to three days after delivery). Local terminology distinguishes between the two. Family members were influential in supporting breastfeeding practices.

Exclusive breastfeeding (feeding breast milk with no water or supplementary feeding) is not practiced. There is no term for exclusive breastfeeding, and most children under four months are fed water, glucose, juice, non-human milk, and soft foods. Bottle feeding is common, which is dangerous in the presence of poor knowledge of bottle hygiene, flies, and a scarcity of water.

People knew that a child should be breastfed for two years. However, most mothers who got pregnant discontinued breastfeeding. The common belief was that the breast milk is not safe for the unborn baby as well as the young child.

People understood that a mother's diet and health affected her breast milk. Respondents associated eating and drinking more, and eating better foods, with breast milk production. Mothers face diet restrictions in the first 40 days and after that are based on beliefs about the effects of food (generally "hot" effects and "cold" effects) on mothers and children. The restricted diet may affect the health of a mother who is both lactating and recovering from the stress of delivery. Depression and illness were also thought to affect breast milk production.

While most families felt they started weaning at around five to six months, the introduction of soft foods and juices at a much earlier age suggests that weaning takes place along a longer continuum. Many weaning diets include foods of limited nutritional value. Children often eat softened versions of family foods that may not include nutritional variety. Many weaning diets include high-carbohydrate, low-protein foods or foods of low nutritional value. In responding to a question about what they had fed their children in the last 24 hours, mothers mostly reported giving their children boiled water, sugary tea,

melon and watermelon, soup, soupy rice with pulses, bread, rice, potatoes, yogurt, and animal or powdered milk, cookies and wheat biscuits. Some mothers commented that they did not have time to make special food for infants. What people fed their children was informed by their perception of the effects of "hot" and "cold" foods.

Care of sick children often involved continuation of breastfeeding and special feeding. Families took sick children to the clinic, but also used a variety of home remedies based on traditional beliefs. Most respondents knew that breastfeeding should continue when children were sick, and some sought to increase it. Many families reported that they avoided giving children foods that they perceived as difficult to digest, and they supplemented their sick children's diets with sweet, milky dishes. Aware that babies experience loss of appetite when they are sick, some reported coaxing the child to eat. Fortunately, many families appeared to know how and when to use oral rehydration solution (ORS) for diarreah, and others knew to feed vitamin rich fruits to their sick children.

Child malnutrition probably had as much to do with poor diet practices as it did with the drought. While the drought clearly affected people in the Andkhoy area, and respondents told about loss of assets and poorer diets, the research was conducted after the drought had largely broken. The researchers found that children under two still faced poor diet diversity.

Recommendations

- Develop health education/counseling messages about breastfeeding and weaning that take better-understood beliefs and practices into account
- Target messages broadly—at mothers, other family members, and influential community members
- Use local knowledge that supports positive practices in messages and other outreach
- Challenge/correct misconceptions immediate and exclusive breastfeeding and about weaning foods and offer ways to improve diet diversity

Background and Introduction

This report presents the findings of an exploratory, qualitative study of breastfeeding and weaning practices conducted by Save the Children Federation, Inc. (SC/US) in the Andkhoy area of Afghanistan's Faryab Province between August 7 and 14, 2002.

SC/US is implementing a livelihoods-based food security and nutrition surveillance system in northern Afghanistan. As one activity of the surveillance system, SC/US conducted nutritional surveys in four locations.[1] The results of the surveys showed that acute malnutrition, or wasting, rates were concerning, but not at a level to trigger therapeutic feeding,[2] despite the region's extended drought and its effects on food production and access. However, the survey results clearly showed a higher prevalence of acute malnutrition among younger children (aged six to 29 months) than among older children (aged 30 to 59 months). To explore the reasons behind higher malnutrition in younger children, the surveillance system project included exploratory research on breastfeeding and weaning practices.

The main influences on a child's growth are infant feeding practices, especially breastfeeding and complementary feeding, and exposure to infectious diseases.[3] It is during the weaning period, when the child starts taking nutrition other than breast milk, that malnutrition and growth faltering/growth failure are most pronounced. They can be caused by poor breastfeeding practices, inappropriate timing of complementary food intake, under-nutritious complementary food intake, and infrequent feedings. SC/US nutrition survey results also showed chronic malnutrition, or stunting, rates of around 50%. In the Andkhoy area, SC/US found a global stunting rate of 47.4% [CI: 44.1%–50.8%] using height-for-age Z scores and a severely stunted rate of 22.6% [CI: 19.9%–25.5%] among children aged 0 to 59 months. In Afghanistan, as in many developing countries, chronic malnutrition (and the resulting growth failure that arises in young children) is a matter of public health concern in Afghanistan.

Save the Children conducted this qualitative and exploratory study to learn about breastfeeding and weaning beliefs and practices for children under the age of two, and if and how these practices had been affected by the drought. This qualitative survey was conducted as part of the SC/US food security surveillance system in the Andkhoy area (a cluster of districts including Andkhoy town and surrounding Qurghan subdistrict, Qaramqul district, and Qurghan district) between August 7 and 14, 2002. The objectives of the research were to:

- Improve understanding of breastfeeding practices, especially those related to colostrum, and immediate and exclusive breastfeeding in the Andkhoy area.
- Improve understanding of weaning practices among communities in the Andkhoy area, especially for children between six and 24 months old.
- Explore breastfeeding practices during children's illness.
- Explore whether, and how, the practices above were affected by the drought.

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[1] Save the Children Federation, Inc., "Nutrition Survey Report: Andkhoy, Khancharbagh, Qaramqul, and Qurghan Districts, Jawzjan Province, June 19-22, 2002"; Save the Children Federation, Inc., "Nutrition Survey Report: Belcheragh District, Faryab Province, Northern Afghanistan, April 7-12, 2002"; Save the Children Federation, Inc., "Nutrition Survey Report: Kohistan District, Faryab Province, Northern Afghanistan, 31 July-9 August, 2002"; Save the Children Federation, Inc., "Nutrition Survey Report: Kohistanat District, Sar-i Pul Province, Northern Afghanistan, April 29-May 3, 2002." For additional information on Faryab, see also Medicins Sans Frontier , "Nutritional Survey, Faryab Province, Afghanistan," August 2002.

[2] It is important to recognize that different agencies take different positions on the question of when acute malnutrition should be addressed by health education and when by other responses.

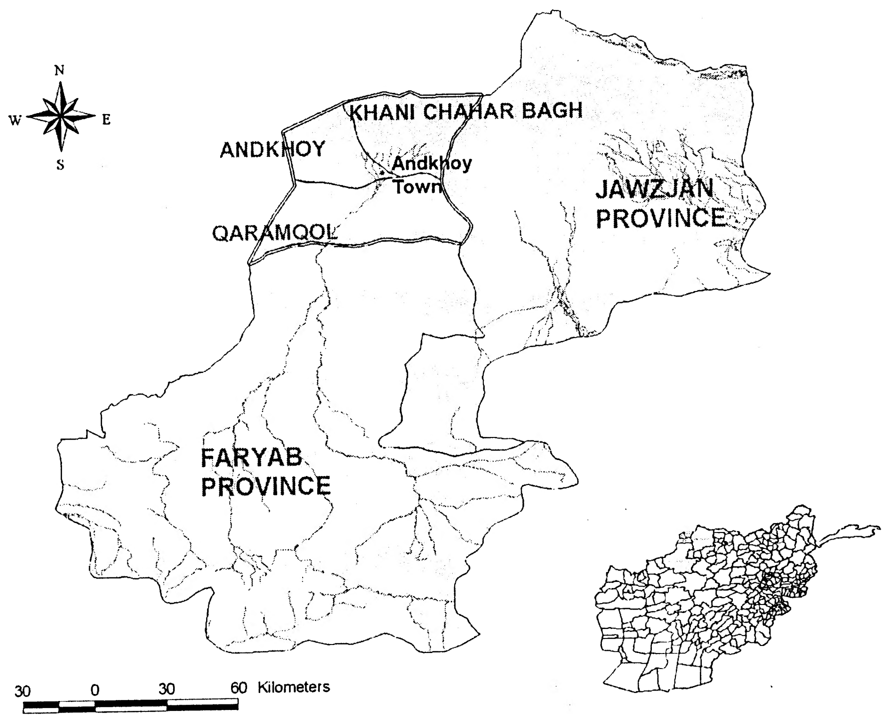
[3] G. Beaton et al, "Chapter 5: Growth monitoring, Individual level – Assessment of Trends", Appropriate Uses of Anthropometric Indices in Children, ed. ACC/SCN (ACC/SCN 1998) 24-36

SC/US will use the findings of this research to help refine health education and counseling messages targeting mothers and caretakers used in primary health care programs in Afghanistan and to inform behavior change strategies that specifically target breastfeeding and weaning practices.

The Research Location—The Andkhoy Area

The four districts of Andkhoy, Khancharbagh, Qaramqul, and Qurghan (hereafter referred to as the Andkhoy area or Andkhoy cluster) are located in the northern part of Faryab Province in northwestern Afghanistan.[4] There are 55 villages in the Andkhoy area. The total population of the four districts is estimated to be 145,608.[5] The population of the Andkhoy area is about 63.5% Uzbek, 33.6% Turkmen, 2.4% Tajik, and 0.5% Pashtun.[6]

Andkhoy town is the one urban center in the area. It is located approximately one and a half hour's drive from the provincial capital of Jawzjan province, Shiberghan, which is a further two hour's drive from Mazar-i Sharif, the main city center in northern Afghanistan. It is much farther away (about 6 hours by road) from its own provincial capital, Maimana. Andkhoy is the first town in Afghanistan when entering the country from Turkmenistan and is a commercial, trading and transport hub.



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4 Currently part of Faryab Province, under some political administrations these districts become a part of Jawzjan Province.

5 UNICEF uses this figure for national Immunization Days (NIDs)

6 KPC survey to assess the knowledge and practice of mothers and coverage of key maternal and child health programs conducted by Save the Children Federation, Inc, 1999

The Andkhoy area is primarily rural, although the four districts are at the end of an irrigation system and therefore have limited agricultural productivity. The economy in these districts is primarily reliant on the production of carpets, and many women are engaged full time in carpet weaving. Livestock is also an important source of cash as well as food. Agricultural activities in the area include the cultivation of fruits (mostly melons) and fodder, wheat, and sesame.

SC/US has worked in the Andkhoy area since 1996, supporting the Ministry of Health (MoH) in running a primary health care (PHC) program from four clinics in the four Andkhoy districts.[7] People in the area are very aware of the need for health care, and make use of the services available. The goal of the program is to reduce morbidity and mortality of women and children through implementing a comprehensive and cost-effective community-based PHC program. The package of PHC interventions includes treatment for respiratory infections and diarrhea, immunizations, growth monitoring and vitamin A distribution, prenatal care, clean home delivery and access to basic emergency obstetric care (in Andkhoy town), promotion of breastfeeding, and family planning counseling. The health system includes female outreach workers and several female staff members in the clinics.

SC/US has also implemented a microcredit program for women in the Andkhoy area since 1995; most borrowers receive loans for carpet production. In late 2000, SC/US began to respond to the drought with food distribution, cash for work, drought coping loan, and health and nutrition education activities. SC/US distributed WFP wheat and complementary food items (sugar, iodized salt, oil, corn-soy blend, and beans) to 80% of the population in the four districts over a one-year period ending in October 2002.

Food and Nutritional Security in the Research Location

The arid plains of the four districts border Turkmenistan and, like other districts in northwestern Afghanistan, have been affected by the recent years of drought. The World Food Program (WFP), in its Vulnerability Assessment and Mapping (VAM) exercises, identified this area as being significantly affected by the drought in 2000 to 2002.

A comprehensive population-based two-stage cluster survey conducted by SC/US in the four districts in August 2000 showed that 10.9% (95% confidence interval: 8.2 – 14.2%) of children aged six to 59 months in the Andkhoy area were suffering from acute malnutrition and 44.1% (95% confidence interval: 39.5 – 48.7%) of children were suffering from chronic malnutrition.[8] In June 2002, SC/US conducted another two-stage cluster nutritional survey in the Andkhoy area.[9] This survey found a global acute malnutrition rate of 8.7% [CI: 5.9-11.5%] and a severe acute malnutrition rate of 1.7% [CI: 0.7-2.8%] for children aged six to 59 months. It also found that acute malnutrition was notably higher among children of weaning age (6-29 months) than among infants (ages zero to six months) and older children (ages 30 to 59 months). The table below summarizes survey findings for acute malnutrition.

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7 Presumably for reasons of proximity, government health programs in the Andkhoy area at the time of research and at the time of finalization of this report, supervised by the Jawzjan Province Ministry of Health structure and not the Faryab Province Ministry of Health structure.

8 Save the Children Federation, Inc., "Nutritional Assessment Survey Report of Children Aged 6-59 months, District Andkhoy, Faryab Province, Afghanistan," August 2000

9 Save the Children Federation, Inc., "Nutrition Survey Report: Andkhoy, Khancharbagh, Qaramqul, and Qurghan Districts, Jawzjan Province, June 19-22, 2002"

Prevalence of wasting expressed by W/H Z scores by age group

Age group (n)	Severe % (n)	Moderate % (n)	GAM % (n)	≥ -2 Z scores % (n)
0 – 5 months (53)	0.0% (0)	3.8% (2) CI: 1.2 – 8.8%	3.8% (2) CI: 1.2 – 8.8%	96.2% (51)
6 – 29 months (297)	4.0% (12) CI: 1.3 – 6.8%	14.5% (43) CI: 9.9 – 19.0%	18.5% (55) CI: 12.6 – 24.4%	81.5% (242)
30 – 59 months (531)	0.4% (2) CI: 0.1 – 0.9%	2.8% (15) CI: 1.4 – 4.3%	3.2% (17) CI: 1.7 – 4.7%	96.8% (514)
0 – 59 months (881)	1.6% (14) CI: 0.6 – 2.5%	6.8% (60) CI: 4.7 – 8.9%	8.4% (74) CI: 5.8 – 11.0%	91.6% (807)

The survey found a high global stunting rate of 47.4% [CI: 44.1%-50.8%] and a severe stunting rate of 22.6% [CI: 19.9%-25.5%]. The rates found in the Andkhoy area surveys are similar to the malnutrition rates found in other areas of northern Afghanistan where SC/US has conducted nutritional surveys, i.e., chronic malnutrition rates are high, and acute malnutrition rates, while not alarming, are higher for children aged six to 29 months than for children aged 30 to 59 months. Appendix 1 summarizes acute and chronic malnutrition rates from the Andkhoy area and other SC/US nutritional surveys.

Since the highest acute malnutrition was in the weaning age group, SC/US initiated research to explore the quality of breastfeeding and weaning practices and to identify possible causes for acute malnutrition in this age group.

Previous Breastfeeding and Weaning Research

SC/US was able to identify three pieces of previous recent research addressing breastfeeding and weaning issues in Afghanistan. A 2002 WHO study on issues of breastfeeding and weaning in Kunduz town and the nearby rural Bagh-i Shirkat internally displaced persons (IDP) camp in northeastern Afghanistan involved interviews with mothers who had at least one child under the age of two, mainly focused on 24-hour recall questions about feeding practices.[10] While findings from this study showed some positive practices, such as nearly universal breastfeeding of babies under six months of age and frequent breastfeeding of children up to two years of age, rates of exclusive breastfeeding for children were low.[11] Weaning also appeared to be a problem: interviews indicated that 13% of babies aged six to10 months in the urban population and 50% in the rural population had not received complementary food in the previous 24 hours. Project interviews also showed that babies were started too early on inappropriate foods (like non-human milk and biscuits), and then were maintained on this diet until about age one. Food with iron and vitamins (such as eggs, pulses, and meat) were rarely fed to babies.

UNICEF and the Ministry of Health (MoH) conducted a joint quantitative and qualitative study on feeding practices in the Panjshir Valley in October 2002.[12] This study found low rates of exclusive

[10] WHO, "A Study of Breastfeeding, Weaning, and Other Mothering Practice in Kunduz", May 2002
[11] The percentage of babies under four months who were exclusively breastfed in the last 24 hours were 46.6% in Kunduz town and 56.2% in Bagh-i Shirkat camp, showing that approximately half the infants were not exclusively breastfed. Thirty percent of babies under 10 months in Kunduz and 8.3% of babies of the same age in the Bagh-i Shirkat IDP camp had taken a bottle in the last 24 hours, and 51% in Kunduz town and 14.5% of babies in Bagh-i Shirkat under 10 months had taken a pacifier in the past 24 hours.
[12] UNICEF and Ministry of Health, "Caring Practices Formative Research, Panjsheer Valley Community, Parwan, Afghanistan," March 2003